Voice Memory Keyer

Model MFJ-432

INSTRUCTION MANUAL

CAUTION: Read All Instructions Before Operating Equipment

MFJ ENTERPRISES, INC.

300 Industrial Park Road
Starkville, MS 39759 USA
Tel: 601-323-5869 Fax: 601-323-6551

VERSION 2B

COPYRIGHT © 1996 MFJ ENTERPRISES, INC.

MFJ-432 Voice Memory Keyer™

Introduction

The *MFJ-432 Voice Memory Keyer* will take you to new dimensions in the Contest world. Do poor band conditions leave you hoarse and frustrated? Not any more! By storing your own natural voice in the MFJ-432 *Voice Memory Keyer*, you can repeat the same message as many times as necessary. You can *now* operate most of a contest by just pressing a few buttons and still have your own voice when you're finished.

The *MFJ-432 Voice Memory Keyer* is capable of storing as many as four natural sounding messages in a total of 20 seconds. It will also repeat stored messages continuously. A built in speaker allows you to monitor your stored messages. Internal jumpers let you customize your it to own rig. Contests have *never* been easier!

Connections

Power

A 12 Vdc 300 milliamp power supply should be used with the MFJ-432. The power jack accepts a 2.1mm coaxial plug with the center conductor positive. An optional dc supply, the MFJ-1312B, is available from MFJ. Connect your MFJ-1312B or compatible dc supply (coaxial line with shield ground) into the power jack on the MFJ-432.

Radio and Microphone Connections

This unit supports Icom, Kenwood, or Yaesu radios with 8 pin microphone connectors. Internal jumpers are used to set the unit for each make of radio. The MFJ-432 is set for Kenwood at the factory. Jumpers can be changed to the appropriate settings for Icom or Yaesu radios. The unit should simply be open and the jumpers adjusted to the Y settings for Yaesu or the I settings for Icom. The jumpers should be changed on both HD1 and J4.

Output Level

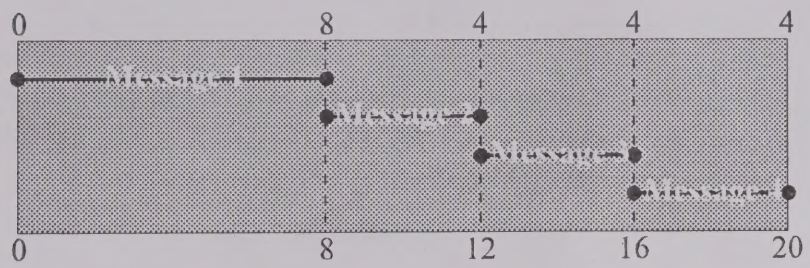
The audio output level to your radio may be adjusted using the trimpot labeled OUTPUT LEVEL CONTROL. The control is accesible through a hole in the back panel. A small slotted screwdriver can be used to adjust the trimpot.

Audio In and Audio Out

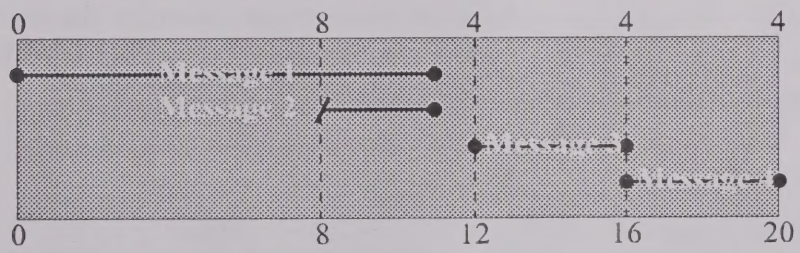
The AUDIO IN and AUDIO OUT jacks accept standard mono or stereo 3.5 mm miniature jacks. The AUDIO OUT jack is driven differentially across the tip and the shield of the jack. The AUDIO IN jack is used to record audio from your radio or other external source. The AUDIO IN jack should have the audio on the tip and ground on the shield of the connector.

Message Memories

The message space is a continuous block of audio memory. This large block is divided into 4 message memories. Memory 1 starts at 0 seconds. Memory 2 starts at 8 seconds. Memory 3 starts at 12 seconds. Memory 4 starts at 16 seconds. Each section of memory can only contain 1 messages' audio. Messages of 8, 4, 4, and 4 seconds long will optimize usage of available memory.

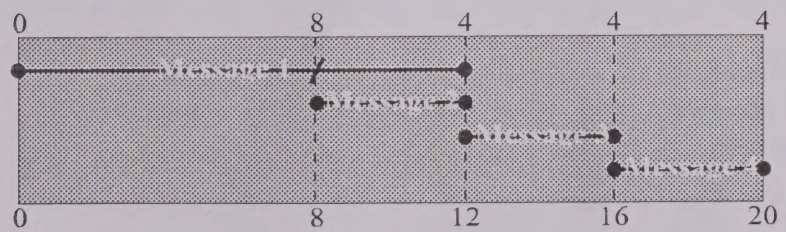


Message 1 may be as long as 20 seconds, but because only one message can be in a memory block, the other messages would contain portions of message 1 if this message was longer than 8 seconds. If message 4 is recorded longer than 4 seconds, all audio over 4 seconds will be lost.



Suppose a message is saved in message 1 for 11 seconds. Message 2 starts at the 8 second point so it contains a 3-second part of message 1. Message 2 will be unusable unless the audio saved after 8 seconds is an independent message.

If message 2 is re-recorded, it would write over the portion of message 1 in message 2's memory area. This new message would also write over the end flag for message 1. Message 1 would then play for 8 seconds and then play all of message 2. See the diagram below.

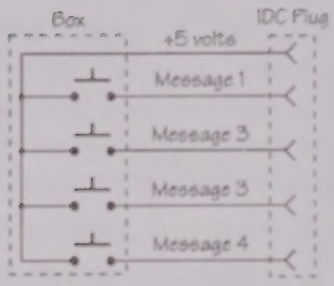


Looping

Message 1 is the only message that will repeat. The length of the pause between loops in message 1 may be adjusted using the trimpot accessed through the hole labeled REPEAT DELAY on the back panel. A small slotted screwdriver can be used to adjust the trimpot.

Accessory Circuits

Many circuits can be added to the accessory port to implement different functions. Each message line is available on this port along with +5 Vdc. The message line must be asserted high, to 5 Vdc, in order to play a message.



Implementing a Remote:
One of the simplest circuits to implement for the Voice keyer is a remote. A remote requires 4 momentary contact SPST switches, a length of 5 conductor cable, a 5 pin IDC connector and a small box to hold the switches.

Battery Installation and Removal

This unit can be used with a 9 volt battery for mobile operation. Remove the cover to begin battery installation. Slide the plastic battery clip insulator down on the wire and install the battery. Press the battery into the battery holder and replace the cover.

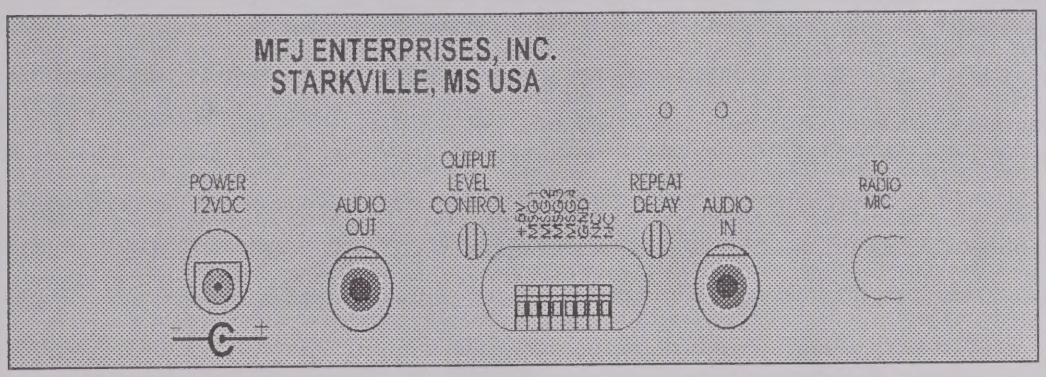
Technical Assistance

If you have any problem with this unit first check the appropriate section of this manual. If the manual does not reference your problem or your problem is not solved by reading the manual, you may call *MFJ Technical Service* at **601-323-0549** or the *MFJ Factory* at **601-323-5869**. You will be best helped if you have your unit, manual and all information on your station handy so you can answer any questions the technicians may ask.

You can also send questions by mail to MFJ Enterprises, INC., 300 Industrial Park Road, Starkville, MS 39759; by FAX to 601-323-6551; through Compuserve at 76206,1763; or by email to 76206.1763@Compuserve.com. Send a complete description of your problem, an explanation of exactly how you are using your unit, and a complete description of your station.

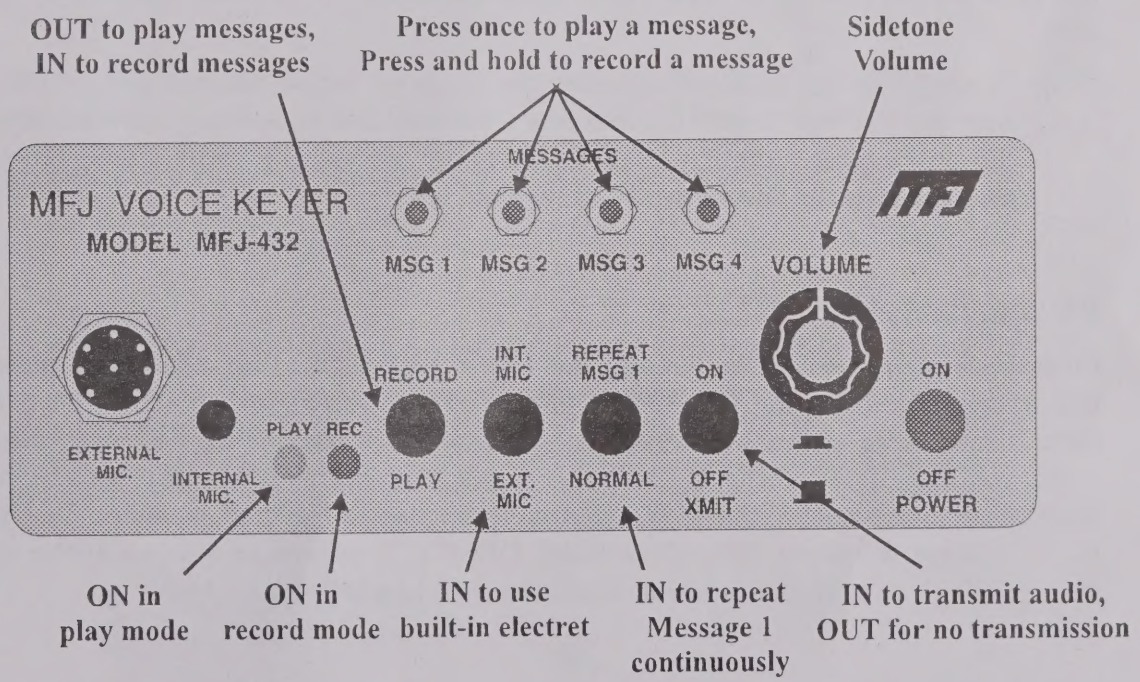
Accessory Port

Beside the audio in jack is a connector for a IDC plug. Each message line plus 5 volts out is available on this port. This plug can be used to implement a remote or other accessory circuits. See the section entitled "Accessory Circuits" for more details.



Basic Operation

The Voice Keyer is simple to operate. The push-button marked PWR controls power to the unit. After turning the unit on, either the PLAY or the REC LED should light.



Recording a message

Push the RECORD PLAY button. The REC LED should light. Press and hold the appropriate message button while speaking into the microphone. Release the message button when the message is complete. Pressing the PTT switch is unnecessary if using a microphone connected in the EXTERNAL MIC jack. The radio will be keyed and the message will be transmitted over the air if the PTT switch is pressed.

Re-recording the message replaces an existing message. A re-recorded message will erase any messages that it overruns. See the section entitled ***Message Memories*** for more detailed information.

A feature allowing immediate cancellation of an outgoing message can be installed. This is accomplished by programming memory 4, and using it as a "cancel" button.

To use memory four as a cancel OGM (out going message) button:

1.) Place the Voice Keyer in the record mode.

2.) ***Briefly*** tap memory button four.

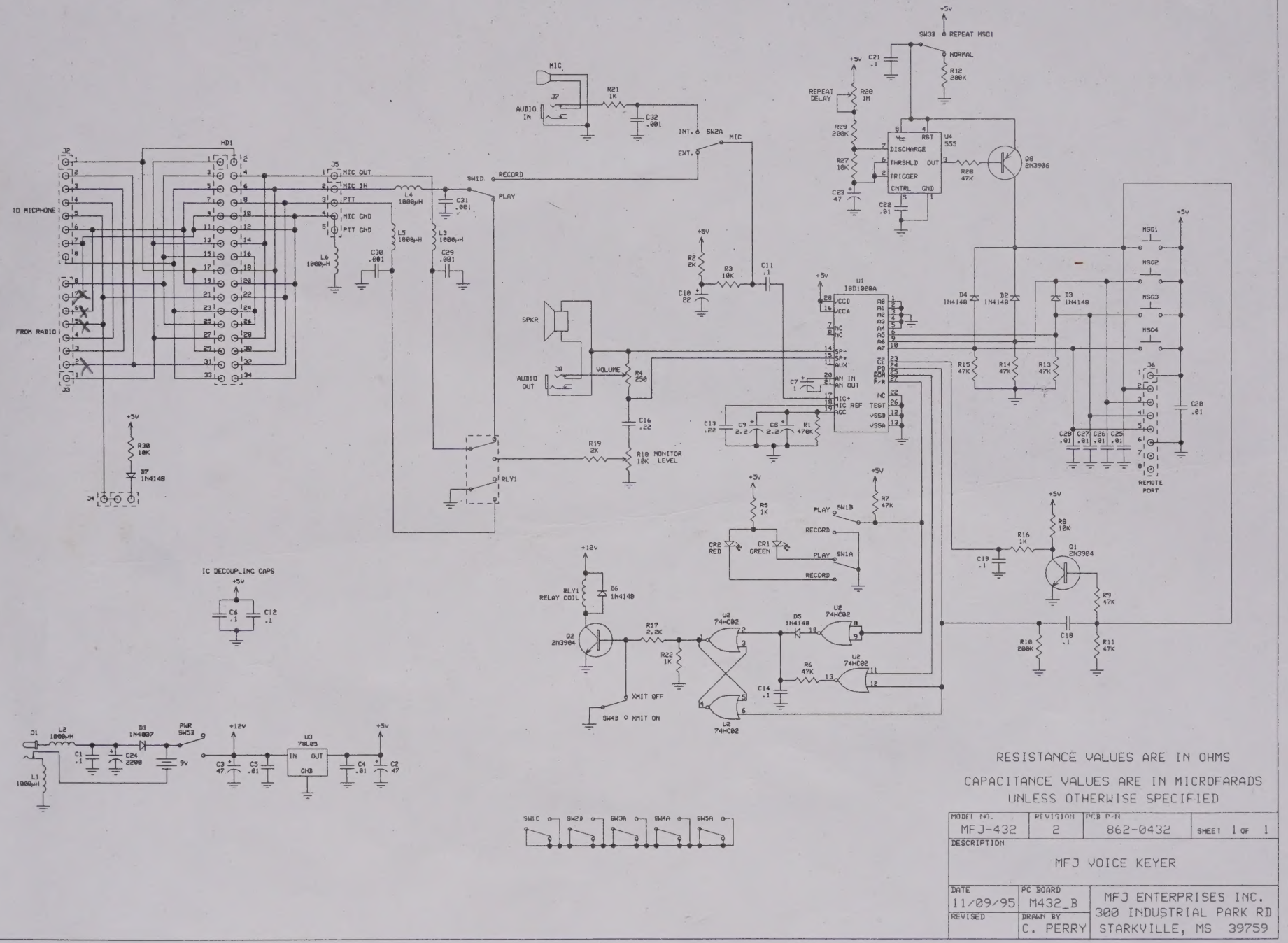
3.) Release the record button.

This action records a very short burst of no audio in position 4. If the operator is playing any other memory, he or she can immediately silence the VK by tapping memory button four.

Note: Tapping four to cancel will not stop the automatic repeat function of message one. Memory four *will* cancel the immediate memory one auto-repeat transmission, but the auto-repeat button must be released to prevent VK from trying to repeat message after the normal cycle time elapses.

Playing a message

Push the RECORD/PLAY button until the PLAY LED is lit. Press the correct message button to play a message. The XMIT button in the outward position allows the user to listen to a message without transmitting it. Press and lock the REPEAT MSG 1 button to repeat message 1. The MFJ-432 will play message 1 once and then start transmitting it over the air until the REPEAT MSG 1 button is released to the "out" position. To change the delay time, a trimpot, labeled REPEAT DELAY, is accessible through a hole in the back panel. A small slotted screwdriver can be used to adjust the trimpot.



RESISTANCE VALUES ARE IN OHMS

CAPACITANCE VALUES ARE IN MICROFARADS UNLESS OTHERWISE SPECIFIED

MODEL NO.	REVISION	PCB P/N	SHEET
MFJ-432	2	862-0432	1 OF 1

DESCRIPTION

MFJ VOICE KEYER

DATE	PC BOARD	MFJ ENTERPRISES INC.
11/09/95	M432_B	300 INDUSTRIAL PARK RD
REVISED	DRAWN BY	STARKVILLE, MS 39759
	C. PERRY	

FULL 12 MONTH WARRANTY

MFJ Enterprises, Inc. warrants to the original owner of this product, if manufactured by MFJ Enterprises, Inc. and purchased from an authorized dealer or directly from MFJ Enterprises, Inc. to be free from defects in material and workmanship for a period of 12 months from date of purchase provided the following terms of this warranty are satisfied.

1. The purchaser must retain the dated proof-of-purchase (bill of sale, canceled check, credit card or money order receipt, etc.) describing the product to establish the validity of the warranty claim and submit the original or machine reproduction of such proof of purchase to MFJ Enterprises, Inc. at the time of warranty service. MFJ Enterprises, Inc. shall have the discretion to deny warranty without dated proof-of-purchase. Any evidence of alteration, erasure, or forgery shall be cause to void any and all warranty terms immediately.

2. MFJ Enterprises, Inc. agrees to repair or replace at MFJ's option without charge to the original owner any defective product under warrantee provided the product is returned postage prepaid to MFJ Enterprises, Inc. with a personal check, cashiers check, or money order for **$7.00** covering postage and handling.

3. This warranty is **NOT** void for owners who attempt to repair defective units. Technical consultation is available by calling the Service Department at 601-323-0549 or the MFJ Factory at 601-323-5869.

4. This warranty does not apply to kits sold by or manufactured by MFJ Enterprises, Inc.

5. Wired and tested PC board products are covered by this warranty provided **only the wired and tested PC board product is returned.'** Wired and tested PC boards installed in the owner's cabinet or connected to switches, jacks, or cables, etc. sent to MFJ Enterprises, Inc. will be returned at the owner's expense unrepaired.

6. Under no circumstances is MFJ Enterprises, Inc. liable for consequential damages to person or property by the use of any MFJ products.

7. **Out-of-Warranty Service:** MFJ Enterprises, Inc. will repair any out-of-warranty product provided the unit is shipped prepaid. All repaired units will be shipped COD to the owner. Repair charges will be added to the COD fee unless other arrangements are made.

8. This warranty is given in lieu of any other warranty expressed or implied.

9. MFJ Enterprises, Inc. reserves the right to make changes or improvements in design or manufacture without incurring any obligation to install such changes upon any of the products previously manufactured.

10. All MFJ products to be serviced in-warranty or out-of-warranty should be addressed to **MFJ Enterprises, Inc., 300 Industrial Park Road, Starkville, Mississippi 39759 USA** and must be accompanied by a letter describing the problem in detail along with a copy of your dated proof-of-purchase.

11. This warranty gives you specific rights, and you may also have other rights which vary from state to state.